

Bio dolomer

Biodegradable Polymers

Product Information

Version 1.1 October 2018

Biodolomer® Fiber

® = Biodolomer is a registered trademark of GAIA

Product Description

Biodolomer® Fiber is a biodegradable biomaterial developed for the thermoforming process.

Biodolomer® Fiber is a compound of a biodegradable aliphatic-aromatic copolyester, polylactic acid (PLA), and calcium carbonate.

Bidolomer® Fiber is based on renewable resources.

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Biodolomer® Fiber exhibits the following properties:

- High strength and stiffness
- High melt strength
- Good processability on conventional sheet extrusion lines
- Printable without corona treatment
- Sealable

Trials are always recommended to assess the quality of the final product.

Compostability and Biodegradability

Biodolomer® Fiber fulfills the requirements of the existing standards for compostable and biodegradable polymers, because it can be degraded by microorganisms.

The biodegradation process in soil depends on the specific environment (climate, soil quality, population of microorganisms).

Food Regulatory Status

Biodolomer® Fiber is one of the few compostable polymers, which complies in its composition with the European food stuff legislation for food contact, EU Directive 10 / 2011 / EC with amendment 2016/1416 and US food contact notification for the main components: e. g. FCN 178, 475 and 907. Specific limitations and more details are given on request.

The converter or packer has to check the suitability of the article for the application.

Form Supplied and Storage

Biodolomer® Fiber is supplied as lenticular pellets in big bags. Temperatures during transportation and storage may not exceed 60 °C at any time. Storage time of unopened bags may not surpass 12 month at room temperature (23 °C).

Applications

Biodolomer® Fiber has been developed for the conversion to extruded films from 0.3 - 8 mm thickness using a sheet extrusion process with subsequent thermoforming operation. Typical applications are trays, boards and other thermoformed containers.

Basic Material Properties of Biodolomer® Fiber

Property	Property	Property	Biodolomer® Fiber
Density	g/cm³	ISO 1183	1.05 ~ 1.15
MFI190 °C, 2.16 kg	g/10min.	ISO 1133	3 - 4
E-modulus Strain at break (v = 50 mm / min)	MPa	ISO 527	2555/2200
	%	ISO 527	56/38
Drying:			
Drying temperature	°C		40
Drying time	min		60
Processing:			
Melt temperature range	°C	-	155 - 170
Melt temperature, ideal	°C	-	165
Chill roll, range	°C	-	10 - 40
Chill roll, ideal	°C	-	30
Residence time, max.	minuter	-	2
Machine settings:			
Temperature flange (hopper)	°C	-	25
Barrel temperature 1, (feeding zone)	°C	-	165
Barrel temperature 2, (comp. zone)	°C	-	165
Barrel temperature 3, (metering zone)	°C	-	165
Barrel temperature 4, (nozzle)	°C	-	155
Thermal properties:			
HDT B (0.45MPa)	°C	ISO 75-1/-2	70

Processing settings Biodolomer® Fiber

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Note

The information submitted in this document is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance for a special purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed. (October 2018).